

### ON THE INDUCTION OF ANTIRACHITIC PROPERTIES IN RATONS BY EXPOSURE TO LIGHT

IN the issue of September 5, 1924, of *SCIENCE*, Steenbock published a communication bearing a title similar to the above. He reported that by irradiation he was able to activate fats which were "otherwise negative in preventing rickets" so that they were rendered active and effected a rapid healing of lesions.

In this connection I wish to call attention to a similar investigation which was reported by me at the meeting of the American Pediatric Society, at Pittsfield, on June 7. These experiments consisted of irradiating various fluids with the mercury vapor quartz lamp. The results were summarized in this paper as follows: "that it was found that cotton seed oil when irradiated for an hour at a distance of one foot had acquired antirachitic properties. In order to exclude the possibility that the effect might be due to an antirachitic potency of cotton seed oil, linseed oil was substituted and the experiment carried out in the same way—0.1 cc. and 0.25 cc. being given daily to each rat. The same result was obtained, namely the development of rickets when non-irradiated oil was fed and the prevention of rickets when the oil was given which had been irradiated."

It may be added that the potency of cod liver oil is also enhanced by irradiation. It will be seen that the experiments which we have reported brought about results in regard to antirachitic actions which are similar to those recently communicated in this journal.

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### SCIENTIFIC BOOKS

*Effect of Variations in the Assumed Figure of the Earth on the Mapping of a Large Area. Special Publication No. 100 of the U. S. Coast and Geodetic Survey.* By WALTER D. LAMBERT, Mathematician, Division of Geodesy.

THE question of how much correction to computed geographic positions would be required in the change from one spheroid of reference to another with slightly different elements of definition is one that must always be considered by the practical geodesist.

This publication attempts to give some idea of the magnitude of such changes from a consideration of an area such as that of the United States. The amount of exact computation requisite even for this general view of the matter is considerable; these computations have been carried out with sufficient precision and they are of value as concrete examples for such as wish to undertake similar calculations.

Heretofore the formulas and explanations of such

computations have been scarcely, if at all, available in English. It is therefore with pleasure that we note that this small pamphlet gives the formulas for such work with an explanation that can be followed with ease even by those who may not be actively engaged in such work. The geodetic study of the figure and size of the earth should be of direct interest both to the engineer in a practical way and to the scientist who should take an active interest in the advancement of knowledge along all lines.

A feature of the publication that is to be commended is the table of comparison of symbols used by various authors given on page 35. One of the things that is always discouraging in reading scientific literature is the use of different notations for the same thing by different authors. Not the least of such offenders against clearness are the mathematicians both pure and applied. This table is therefore of great value to those who want to look into this question without too much preliminary study.

Since this publication furnishes authoritative information on some rather intricate questions of geodesy, it fills a place in English geodetic literature that should appeal in a special way to the scientific world.

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*The Evolution of the Universe, or Creation According to Science.* Transmitted from MICHAEL FARADAY, late electrician and chemist of the Royal Institution of London. Cosmos Publishing Company, Los Angeles, California, 1924. \$2.50.

MICHAEL FARADAY, one of the creators of the science of chemistry and a pioneer in investigations of electricity, died in 1867, at the age of seventy-six.

It will interest chemists and physicists to know that "after transition" to "the scientific spheres of the Spirit World," Faraday has continued his investigations of the "Major Vortex," which is "with other planetary conditions only one state of the Entity," and especially in regard to electrons and the mastery of "the imponderable forces of nature which control the incarnation of a mortal without whose agency the world would roll on for ages in the idealism of the savage types of man and the entities that would be caught in the vortexical currents of the incarnating processes," etc. And all this without once calling on the resources of mathematics, which indicates that formulae and equations are emanations of the material mind.

Without anticipating the discoveries promulgated by the master chemist derived through fifty years of freedom from hampering conditions, I hasten to say that these were presented all or chiefly through "electro-magnetic" "independent slate-writing" to a gen-